

Amendments to the Claims

1. (Previously Presented) A sparger system for use in a reactor, the sparger system comprising a gas outlet for passing gas into the reactor, and a gas distribution system to supply the gas to the outlet, wherein the gas distribution system feeding the sparger with gas to be ejected from the gas outlet is disposed above the sparger outlet in the system, wherein the distance between the sparger gas outlets is at least 15 cm below the distribution system, and wherein the distance between the gas outlet and the reactor floor is less than 20 cm.
2. (Previously Presented) The sparger system of claim 1, wherein the gas outlet is adapted to eject gas across the floor of the reactor.
3. (Previously Presented) The sparger system of claim 1, wherein the sparger outlet is located at the end of the sparger, which is in turn located at the end of a distribution conduit feeding the gas to the sparger.
4. (Previously Presented) The sparger system of claim 1, wherein the distance between the gas outlet and the reactor floor is less than 10 cm.
5. (Previously Presented) The sparger system of claim 1, wherein the gas outlet incorporates a flow controlling means to regulate the speed of the gas jet through the outlet.
6. (Previously Presented) The sparger system of claim 5, wherein the flow controlling means is a Venturi-type orifice having a shroud pipe to limit the injection velocity of the gas.
7. (Previously Presented) The sparger system of claim 1, wherein each sparger has a plurality of outlets directed outwardly from a sparger head and arranged equidistantly from one another around the periphery of the sparger head.
8. (Canceled)
9. (Withdrawn) A method for carrying out a reaction comprising the steps of charging a reactor with reactants and removing the reaction products from the reactor, wherein at least some of the reactants are fed into the reactor via a sparger device, which ejects the reactants

through an outlet, and wherein the sparger device is fed with reactants via a distribution system that is disposed above the sparger.

10. (Withdrawn) A process for the preparation of hydrocarbons in a reactor by reacting carbon monoxide and hydrogen in the presence of a catalyst, preferably a supported cobalt catalyst, and in the presence of liquid hydrocarbons, in which process the carbon monoxide and hydrogen are introduced into the reactor by means of a sparger system according to claim.

11. (Canceled)

12. (Previously Presented) The sparger system of claim 1, wherein the sparger system is used in a reactor with a cooling system and the spargers and cooling system are arranged in corresponding patterns.

13. (Withdrawn) The method of claim 9 wherein the sparger device ejects the reactants through an outlet across the floor of the reactor.